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**Filed:** April 29, 1999

### **REMARKS**

In the Office Action dated December 19, 2002 the Examiner rejected claims 4-6, 29 and 30 under 35 U.S.C. § 112, second paragraph, and rejected claims 1-30 as obvious over Blelloch. Based on the amendments and arguments contained herein, Applicant respectfully requests reconsideration and allowance of all pending claims. If the Examiner feels that a telephone conference would expedite the resolution of this case, the Examiner is respectfully requested to contact the undersigned.

#### **I. THE § 112, SECOND PARAGRAPH REJECTIONS**

The Examiner rejected claims 4 and 5 for referring to the "parallel processing logic." Correction has been made to replace the phrase "parallel processing logic" with "parallel processing network." The Examiner also rejected claim 6 for lacking antecedent basis for the claimed "model parameter." This issue has been resolved by making claim 6 dependent on claim 4 which does refer to a model parameter. Claims 29 and 30 were rejected for lacking antecedent basis for "step (a)." A reference to step "(a)" has been added to claim 29 to address this issue.

#### **II. THE ART REJECTIONS**

As amended, claim 1 requires:

1. (Currently Amended) A parallel processing network in which one or more processes can be spawned, comprising:

a plurality of computers coupled together by a communication link; and

process spawning logic included in one of said plurality of computers that automatically spawns processes in response to user specified criteria and that

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determines whether sufficient processors are available to spawn the processes and, if not, spawns a reduced number of processors based on the number of available processors.

The Examiner contends claim 1 is obvious over the disclosure of Blleloch. The Examiner concluded (and correctly so) that Blleloch does not disclose two claim limitations—(1) the process spawning logic being included in one of the computers, and (2) automatically spawning processes in response to user specified criteria. Despite finding that Blleloch fails to disclose not just one but two claim limitations and without finding another reference to teach the limitations missing from Blleloch, the Examiner still found the claim to be unpatentable. Similarly, the Examiner expressly concluded that Blleloch does not disclose one or more limitations found in at least claims 2-4, 10, 14, 15, 20-26, and 29. A limitation in a claim that is not disclosed in the prior art generally is a decent indicator that the claim is patentable.

The Examiner attempted to explain why the admitted deficiency of Blleloch (the spawning logic being included in one of the computers) was irrelevant:

It would have been obvious to one of ordinary skill in the art to place this logic within one of the computers on the network for the purpose of reducing overhead by reducing the number of machines, however it is not clear that the advantage gained therein overcomes the computational burden presented.

The Examiner seems to be saying that one of skill in the art would have been motivated to modify Blleloch per Applicant's claim because the resulting modification would make the system more efficient. This is not a legally sufficient basis for modifying a reference. *See In re Fine*, 837 F.2d 1071, 1074 (Fed. Cir. 1988) (reversing Examiner's rejection and holding that there must be some objective teaching in the prior art or knowledge generally

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available to one of ordinary skill to support combining references). The Examiner is cautioned that the Applicant's disclosure may not be used in hindsight in an obviousness rejection. *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991) (teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art and not based on applicant's disclosure).

As noted above, the Examiner stated that "it is not clear that the advantage gained therein overcomes the computational burden presented." Thus, according to the Examiner apparently, placing the spawning logic in one of the computers will create a "computational burden" that might outweigh any advantage. That being the case (assuming it is true), then even the Examiner questions the desirability to modify Blelloch to match the claim limitations. Along that same line of thought, as the Examiner is no doubt aware, the MPEP cautions that the "there must be a reasonable expectation of success" when modifying references to read on a claim. MPEP § 706.02(j). The Examiner's own statement casts doubt on the success with regard to modifying Blelloch as advocated by the Examiner.

Moreover, despite the Examiner's conclusion that no less than two limitations in claim 1 are not found in the art of record, the Examiner still rejected claim 1. At least for the above reasons, claim 1 is patentable over the art of record.

Thus, an amendment to claim 1 is not required in response to the Examiner's rejection. However, simply to expedite prosecution, Applicant amends claim 1 to add the limitations that the spawning logic determines whether sufficient processors are available to spawn the processes and, if not, spawns a reduced number of processors based on the

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number of available processors. By contrast, Blleloch teaches allocating all "tasks" to all processing elements. Column 4, lines 19-23. Blleloch does not teach or even suggest allocating a reduced number of tasks based on the number of available processing elements. For this additional reason claim 1 is allowable.

Claims 2-14 depend on or from claim 1 and are patentable at least for the same reasons as claim 1. Some of these limitations are also present in additional dependent claims and the following arguments thus apply with regard to all claims which contain such limitations. Further, with regard to claim 4 (which includes a "model parameter"), the Examiner downplayed the significance of a model parameter arguing that "no considerable advantage is presented by including a model parameter." The statement implies that, for a claim to be patentable, the claimed invention must possess a "considerable advantage" over the prior art. Applicants are unaware of any such requirement and respectfully request the Examiner to provide legal support (for example, from case law or the MPEP) for the Examiner's position.

With regard to claim 5, the Examiner appears to have misread the claim. Claim 5 requires the user-specified criteria to include "a maximum number of CPUs to be used per machine to execute processes." The Examiner rejected the claim on the basis that Blleloch discloses each processing element including a CPU. While this may be true, Blleloch does not disclose the limitation of claim 5 which is that the user-specified criteria includes a maximum number of CPUs to be used per machine to execute processes. That each processing element includes a CPU is irrelevant with regard to claim 5 (and claim 19).

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Similarly, the Examiner rejected claims 7 and 8. Claim 7 requires the user-specified criteria to include a resource parameter and claim 8 requires the resource parameter to refer to a type of network interface. The Examiner noted that Blleloch discloses a router interface. Nowhere does Blleloch disclose that the user-specified parameter includes a resource parameter, and especially a resource parameter that refers to a network interface type. The Examiner is respectfully reminded that, with reference to claim 1, the user-specified criteria include criteria in response to which the spawning logic automatically spawns processes.

Claim 15 has been amended to specify that the spawning logic determines "whether a sufficient number of processors are available to permit the user desired number of processes to be spawned in accordance with the user specified parameters." As explained above, none of the art of record teach or suggest this limitation.

As amended, claim 20 includes "a means for spawning a number of processes that is reduced based on the number of available CPUs." As explained above, Blleloch does not disclose reducing the number of processes based on the number of available CPUs. At least for this reason, claim 20 is patentable, as are its dependent claims, claims 21-23.

Unamended claim 24 is directed to a method of creating processes including, among other limitations, "comparing the criteria to a database of network features to determine if there are a sufficient number of processors to accommodate the desired number of processes." Blleloch does not teach or suggest this limitation. Claims 24-28 thus are patentable.

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Claim 29 is directed to a method including (a) specifying whether processes are to be spawned automatically to match a set of criteria or spawned in accordance with a process group file; (b) spawning processes to match the criteria if automatic spawning is specified in step (a); (c) spawning processes in accordance with the process group file if so specified in step (a). The Examiner observed that Blelloch does not permit specifying whether processes are to be spawned automatically to match a set of criteria or spawned in accordance with a process group file. The Examiner also observed that Blelloch does not even permit processes to be spawned in accordance with a process group as is recited in the claim. Applicants are baffled as to how the Examiner can justify rejecting a claim based on art that is missing so many claim limitations (or even one limitation for that matter).

In addition, the Examiner goes on to explain that Blelloch has advantages over the invention of claim 29. Applicants respectfully submit that the Examiner may have misunderstanding of the relevant standards for assessing the patentability of a claim. As discussed above with regard to claim 4, Applicants are unaware of a "goodness" requirement for a claim to be patentable. A claim is patentable without regard to whether the claimed invention is better, or worse, than a prior art reference.

### **III. CONCLUSION**

In the course of the foregoing discussions, Applicant may have at times referred to claim limitations in shorthand fashion, or may have focused on a particular claim element. This discussion should not be interpreted to mean that the other limitations can be ignored or dismissed. The claims must be viewed as a whole, and each limitation of the claims must be considered when

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determining the patentability of the claims. Moreover, it should be understood that there may be other distinctions between the claims and the prior art which have yet to be raised, but which may be raised in the future. Further, nothing in this document is intended to imply anything regarding the benefit of any claim relative to the art record. If any fees or time extensions are inadvertently omitted or if any fees have been overpaid, please appropriately charge or credit those fees to Conley Rose, P.C. Deposit Account Number 03-2769/1857-0200JMH and enter any time extension(s) necessary to prevent this case from being abandoned.

Respectfully submitted,



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